

WHAT IS CLAIMED IS:

1. A system for managing video network devices,
the system comprising:
a management adapter accessible to a user interface,
5 the management adapter having a list that identifies the
video network devices; and
a device access layer interfaced with the management
adapter and the video network devices, the device access
layer representing the video network devices as objects
10 to support management of the video network devices
through the management adapter.
2. The system of Claim 1 wherein the device access
layer represents the video network devices as Management
15 Beans.
3. The system of Claim 2 wherein each video
network device communicates with the network through one
of plural protocols, the Management Bean for a video
20 network device communicating with the video network
device in the protocol associated with the video network
device.
4. The system of Claim 3 wherein the Management
25 Beans communicate with the management adapter using a
common protocol.
5. The system of Claim 1 wherein the video network
devices have plural types, the device access layer
30 representing each type of video network device as an
object class.

6. The system of Claim 5 wherein a video network device belongs to plural types, the device access layer representing the video network device as plural objects, each of the plural objects belonging to a class corresponding to the plural types.

7. The system of Claim 5 wherein a video network device type comprises an endpoint type.

8. The system of Claim 5 wherein a video network device type comprises an MCU type.

9. The system of Claim 5 wherein a video network device type comprises a gatekeeper type.

10. The system of Claim 5 wherein a video network device comprises a gateway type.

11. The system of Claim 5 wherein a video network device comprises a network device type.

12. The system of Claim 1 wherein the device access layer comprises a Management Bean server having Management Bean objects that correspond to the video network devices, each Management Bean object encapsulating attributes that support access to a video network device.

13. The system of Claim 1 wherein the video network devices comprise one or more of plural device types, each device type having a common interface defined by a Management Bean class.

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14. The system of Claim 13 further comprising first and second video network devices interfaced with the device access layer, the first and second video network devices having a common device type represented by a common Management Bean class, the first video network device communicating with a first Management Bean by a first format, the second video device communicating with a second Management Bean by a second format, the first and second Management Beans communicating with the management adapter by a common format.

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15. A method for communicating with first and second video network devices having first and second communication formats, the method comprising:

interfacing with a management platform through a
5 management interface format to identify the video network devices;

associating the first video network device with a first object and the second video network device with a second object;

10 translating communication to the first video network device with the first object from the interface format to the first communication format; and

translating communication to the second video network device with the second object from the interface
15 format to the second communication format.

16. The method of Claim 15 wherein the first and second objects comprise Management Beans.

20 17. The method of Claim 15 wherein the management interface format comprises SNMP.

18. The method of Claim 15 further comprising:
dividing the video network devices into types of
25 devices; and
establishing an object class for each type of video network device.

19. The method of Claim 18 wherein each type of video network device has a common interface for exchanging data between an external interface and objects of the class associated with the type of video network
5 device.

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20. A method for interfacing an SNMP management application with network devices having disparate native interface protocols, the method comprising:

representing each device as a Management Bean stored
5 on a server;

providing an SNMP management instruction for a device to an SNMP adapter;

communicating the SNMP management instruction using the SNMP adapter as a management bean client in
10 communication with the server; and

communicating the SNMP management instruction from the server through the management bean representing the device to the device in the native protocol of the device.
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21. The method of Claim 20 further comprising:
associating the device receiving the SNMP management instruction with an IP address; and

communicating a second SNMP management instruction
20 to the device with the IP address.

22. The method of Claim 20 further comprising:
listing the network devices in a MIB; and
associating the network devices with IP addresses
25 with the SNMP adapter.

23. The method of Claim 20 further comprising:
communicating between the management bean client and the server with standardized attributes defined for each
30 device.

24. The method of Claim 20 wherein the network devices comprise video devices.

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25) A system for interfacing plural network devices with an application through an SNMP interface, the network devices having disparate native protocols, the system comprising:

5 an adapter in communication with the application to accept SNMP instructions from the application for a network device;

10 an agent in communication with the adapter, the agent representing the network devices as objects having attributes;

15 wherein the adapter and agent cooperate to convert the SNMP instructions to the native protocol with the network device object attributes translated into requests to the network device in the native protocol of the network device.

26. The system of Claim 25 wherein the network devices comprise video network devices.

27. A method for managing a video network having plural video devices, the method comprising:

representing each video device as an object having attributes;

5 communicating management instructions to the objects of the video devices; and

translating object attributes of the communication instructions into device-specific instructions to manage one or more of the video devices.

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28. The method of Claim 27 further comprising:

listing the attributes of an object that represents a video device; and

15 selecting one or more attributes to create a MIB for the video device.

29. The method of Claim 28 further comprising:

selecting one or more variables from one or more pre-existing MIBs associated with the video device for

20 inclusion with the created MIB.

30. The method of Claim 28 wherein the created MIB cooperates with a management application for

communicating management instructions to the object

25 associated with the video device.

31. The method of Claim 30 wherein the communication instructions comprises SNMP management instructions.

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32. The method of Claim 31 wherein the object comprises a management bean.

33. The method of Claim 28 wherein the created MIB consists of read-only variables.

5 34. The method of Claim 28 wherein the created MIB comprises variables for a restricted set of users.

35. The method of Claim 27 wherein the device specific instructions comprise non-SNMP instructions.

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36. A system for managing a video network having plural video network devices, the system comprising:

plural objects, each object having attributes to represent a video network device;

5 one or more lists of the attributes;

one or more MIB having variables of the video network device; and

a MIB summation engine operational to select one or more attributes and one or more variables to dynamically
10 create a MIB for a predetermined one of the video network devices.

37. The system of Claim 36 wherein the created MIB comprises a structure associated with a predetermined and
15 restricted set of users.

38. The system of Claim 37 wherein the structure comprises a tiered folder structure.

20 39. The system of Claim 36 wherein the created MIB comprises read only variables.

40. The system of Claim 36 further comprising a management application associated with the video network
25 and operational to manage the video devices.

41. The system of Claim 40 wherein the management application comprises an SNMP application.

30 42. The system of Claim 41 wherein the created MIB cooperates with the management application to manage the video network device.

43. The system of Claim 42 wherein the object translates instructions from the management application to a protocol native to the network video device.

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44. The system of Claim 43 wherein the object comprises a management bean.

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45. A method for managing disparate video network devices with an SNMP application, the disparate video network devices having disparate native protocols, the method comprising:

- 5 representing the video network devices as objects having attributes, the objects translating instructions from the SNMP application to a native protocol of the video network device associated with the object;
 dynamically creating a MIB for a video network
10 device from selected attributes of the object associated with the video network device; and
 accessing the dynamically created MIB with the SNMP application to manage the associated video network
 device.

- 15 46. The method of Claim 45 wherein dynamically creating further comprises:
 dynamically creating the MIB from selected variables of pre-existing MIBs associated with the video network
20 device.

47. The method of Claim 45 further comprising:
 creating a translator table to associate the attributes with the dynamically created MIB.

- 25 48. The method of Claim 45 wherein the SNMP application comprises HP Openview.

49. The method of Claim 45 wherein dynamically
30 creating the MIB further comprises:
 selecting attributes for inclusion in the MIB to customize the MIB for a specific user.